IN THE CLAIMS:

Cancel claims 63-78, without prejudice.

~~79~~ 1. (Amended) A method of operating a computer system including a processor and a memory system, wherein the memory system includes an array of non-volatile floating gate memory cells partitioned into a plurality of sectors that individually include a distinct group of said array of memory cells that are erasable together as a unit, comprising:

providing said memory array and a memory controller within a card that is removably connectable to the computer system, said controller being connectable to said processor for controlling operation of the array when the card is connected to the computer system,

partitioning the memory cells within the individual sectors into at least a user data portion and an overhead portion,

detecting a predefined condition when individual sectors become unusable and [adding addresses of such unusable sectors to a list maintained within the card that links] linking the addresses of such unusable sectors [addresses] with addresses of other sectors that are useable,

causing the controller, in response to receipt from the processor of an address in a format designating at least one magnetic disk sector, to generate an address of a non-volatile memory sector that corresponds to said at least one magnetic disk sector,

accessing a usable sector of the memory system, if the sector with the generated address is unusable, by referring to the [list to translate the unusable sector address into an address of]

linked address of another sector that is usable and then accessing that other sector,

either writing data to, or reading data from, the user data portion of the accessed usable sector, and

either writing to, or reading from, said overhead portion of the accessed usable sector, information related to either the accessed usable sector or data stored in the user data portion of said accessed useful sector.

~~88.~~ 13 (Amended) The method of claim ~~85~~ 10, wherein [the] partitioning [step] the memory cells includes partitioning [the] said memory cells within the individual sectors to include an additional portion of spare memory cells.

~~90.~~ 15 (Amended) The method of claim ~~85~~ 10, additionally comprising causing the controller to identify and store addresses of any defective non-volatile memory sectors within the array, and, wherein [the sector addressing step] designating an address of a sector includes, in response to designating an address of a defective sector, substituting an address of another sector instead.

~~92.~~ (Amended) A memory system on a card that is connectable to a host computer system, said memory system comprising:

an array of non-volatile floating gate memory cells partitioned into a plurality of sectors that individually include a distinct group of said memory cells that are erasable together as a unit, the individual sectors having enough cells for storing a given amount of user data and overhead data, and

means connectable to said computer system for controlling operation of the array, said controlling means including:

means responsive to receipt of a magnetic disk sector address from the host computer system for addressing a corresponding non-volatile memory sector,

means for reading the overhead data stored in the addressed sector, and

means responsive to the read overhead data for executing an instruction from the host computer system to perform a designated one of reading user data from, or writing user data to, [or erasing] the addressed sector.

~~95~~ 20. (Amended) The memory system according to claim [82] ~~92~~ 17 wherein said magnetic disk sector address includes a head, cylinder and sector.

~~96~~ 21. (Amended) The memory system according to claim [82] ~~92~~ 17 wherein the individual sectors of the memory array additionally have enough cells for providing redundant cells in excess of that necessary to store said given amount of user data and said overhead data, said controlling means additionally including means for substituting redundant cells of a sector for any defective cells within the sector.

Add the following new claims:

--~~98~~. 7 The method according to claim ~~79~~ 1 wherein linking the address of unusable sectors with sectors that are useable includes maintaining a list within the card that links such unusable sectors with addresses of corresponding ones of the other sectors that are useable, and wherein accessing a usable sector

includes referring to the list to translate the address of the unusable sector into an address of a usable sector.--

--~~99~~ 98. The method according to claim ~~79~~ 1 wherein linking the address of such unusable sectors includes storing within individual ones of the defective sectors addresses of corresponding useable sectors, and wherein accessing a usable sector corresponding to an unusable sector includes referring to the useable sector address stored in the unusable sector.--

--100. The method of claim 85, additionally comprising causing the controller to identify any defective non-volatile memory sectors within the array and storing within any of said defective sectors addresses of corresponding ones of other sectors, and, wherein designating an address of a sector includes, in response to designating an address of a defective sector, reading the address in the defective sector of said corresponding other sector and then accessing data within such other sector instead of data within the defective sector.--

--101. A method of operating a computer system including a processor and a memory system, comprising:

providing said memory system as a module that that is connectable to the computer system and which includes an array of non-volatile floating gate memory cells partitioned into a plurality of sectors of cells that are individually erasable together as a unit,

partitioning the memory cells within the individual sectors into at least a user data portion and an overhead data ~~portion,~~

in response to receipt from the processor of an address of at least one mass memory storage block, designating an address of at least one of said non-volatile memory sectors,

either writing user data to, or reading user data from, the user data portion of said at least one non-volatile memory sector,

either writing overhead data to, or reading overhead data from, said overhead portion of said at least one non-volatile memory sector, said overhead data being related either to said at least one non-volatile memory sector or to data stored in the user data portion of said at least one non-volatile memory sector, and

the memory cells of said at least one non-volatile memory sector having been erased together as a unit prior to writing user data or overhead data therein.--

--102. The method according to claim 101, wherein designating an address of at least one of said non-volatile memory sectors includes use of a controller that is provided as part of said module.--

--103. The method according to claim 101, wherein the overhead data written to the overhead data portion of the non-volatile memory sectors includes addresses of the individual sectors in which the addresses are stored.--

--104. The method according to claim 101, wherein the overhead data written to the overhead data portion of the non-volatile memory sectors includes error correction codes for data stored in corresponding user data portions of the individual sectors.--

--105. The method according to claim 101, wherein the overhead data written to the overhead data portion of individual ones of the non-volatile memory sectors includes, in a case where the a sector is unusable, an address of a usable sector as a substitute for the unusable sector.--

--106. The method according to claim 101, additionally comprising:

identifying when individual ones of the non-volatile memory sectors become unusable,

linking the addresses of the unusable sectors with addresses of sectors that are useable, and

accessing a non-volatile memory sector by, when the sector being accessed is unusable, referring to the linked address of a sector that is useable, thereby to remap the unusable sector into another sector that is useable.--

--107. The method according to claim 106, wherein linking the address of unusable sectors with sectors that are useable includes maintaining a list within the module that links such unusable sectors with addresses of corresponding ones of the other sectors that are useable, and wherein accessing a sector includes referring to the list to translate the address of the unusable sector into an address of a corresponding usable sector.--

--108. The method according to claim 106 wherein linking the address of such unusable sectors includes storing addresses of corresponding useable sectors within the overhead portion of individual ones of the unusable sectors, and wherein accessing a usable sector includes referring to the useable sector address stored in the unusable sector overhead portion.--

--109. The method according to any one of claims 106-108 wherein a non-volatile memory sector is identified to be unusable when it becomes defective.--

--110. The method according to any one of claims 101-108, wherein the user data portion of the individual sectors has a capacity of substantially 512 bytes.--

--111. The method according to any one of claims 101-108 wherein causing the controller to designate an address of at least one of said non-volatile memory sectors includes designating a unique sector address for individual ones of the mass memory storage block addresses received from the processor.--

--112. The method according to claim 101, wherein partitioning of the memory cells includes partitioning the memory cells within the individual sectors to include an additional portion of spare memory cells.--

--113. The method according to claim 101, wherein the overhead data stored in said overhead portion of the individual sectors includes an identification of any defective cells within the user data portion of corresponding ones of said sectors, said method additionally comprising causing the controller to read the identification of defective cells from the overhead portion of said addressed at least one non-volatile memory sector and then to substitute therefore other cells within the spare cell portion of said addressed at least one non-volatile memory sector.--

--114. The method according to claim 101, additionally comprising causing the controller to identify and store addresses of any defective non-volatile memory sectors within the module, and wherein designating an address of at least one of said non-volatile

memory sectors includes, in response to designating an address of a defective sector, substituting an address of another sector instead.--

--115. The method according to claim 114 wherein identifying when a sector becomes defective includes identifying when a sector has a number of defective memory cells therein which exceeds a given number.--

--116. A memory system unit having electrical terminations for establishing a connection with a host computer system, said memory system comprising:

an array of non-volatile floating gate memory cells partitioned into a plurality of sectors that individually include a distinct group of said memory cells that are erasable together as a unit, the individual sectors having enough cells for storing a given amount of user data and some overhead data, and

a memory controller connected between said electrical terminations and said memory cell array for controlling operation of the array, said controller including:

means responsive to receipt of one or more mass memory storage block addresses through said terminations for addressing one or more of the non-volatile memory sectors, said addressing means including means responsive to an identification of any of the non-volatile memory sectors that are unusable for substituting another usable sector therefor,

means for reading overhead data stored in the addressed sector, and

means responsive to the read overhead data for either reading user data from, or writing user data to, the addressed sector.--

--24 ~~117~~. The memory system according to claim 23 ~~116~~ wherein the identification of any unusable sectors includes a list maintained within the memory system unit that links addresses of unusable sectors with corresponding usable sectors.--

--25 ~~118~~. The memory system according to claim 23 ~~116~~ wherein the identification of any unusable sectors includes a record of individual addresses of substitute usable sectors stored as part of the overhead data in respective ones of the unusable sectors.--

--26 ~~119~~. The memory system according to any one of claims 23-25 ~~116-118~~ wherein the identification of any unusable sectors includes inoperable or defective sectors.--

--27 ~~120~~. The memory system according to any one of claims 23-25 ~~116-118~~ wherein the identification of any unusable sectors includes sectors that contain a number of defective cells in excess of a preset number.--

--30 ~~121~~. The memory system according to claim 23 ~~116~~ wherein said individual non-volatile memory sectors additionally have redundant memory cells in excess of that necessary to store said given amount of user data and said overhead data, said controller additionally including means for substituting redundant memory cells of an individual sector for defective memory cells within the individual sector.--

--31 ~~122~~. The memory system according to claim 23 ~~116~~ wherein the overhead data reading means includes means for reading from the overhead data of an addressed sector an address of that sector, and

wherein the controller additionally includes means for comparing the read overhead data address with the address of the sector, thereby to confirm that the desired sector has been addressed.--

--~~123~~ 32. The memory system according to any one of claims ~~116-118~~ 23-25, ~~121~~ 30 and ~~122~~ 31 wherein the given amount of user data that is storable in individual sectors is substantially equal to a size of individual mass memory storage blocks of the host computer system, and wherein the addressing means maps addresses of individual ones of the mass memory storage blocks into unique individual ones of the non-volatile memory sectors.--

--~~124~~ 28. The memory system according to any one of claims ~~116-118~~ 23-25 wherein said given amount of user data is substantially equal to 512 bytes.--

--~~125~~ 29. The memory system according to any one of claims ~~116-118~~ 23-25 wherein said controller additionally includes means for selecting a plurality of sectors for an erase operation, and means for simultaneously performing an erase operation on only the selected plurality of sectors.--

--~~126~~ 33. The memory system according to any one of claims ~~116-118~~ 23-25, ~~121~~ 30 and ~~122~~ 31 wherein said memory system unit is implemented on a single printed circuit card.--

--~~127~~ 34. The memory system according to any one of claims ~~116-118~~ 23-25, ~~121~~ 30 and ~~122~~ 31 wherein the one or more mass memory storage block addresses to which the controller addressing means is responsive consists of one or more magnetic disk sector addresses.